(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
26 July 2001 (26.07.2001)

PCT

(10) International Publication Number
WO 01/53865 A1

(51) International Patent Classification[7]: G02B 6/34, G01N 21/47

(21) International Application Number: PCT/GB01/00170

(22) International Filing Date: 18 January 2001 (18.01.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0000954.8 18 January 2000 (18.01.2000) GB

(71) Applicant *(for all designated States except US)*: **RENISHAW PLC** [GB/GB]; New Mills, Wotton-under-Edge, Gloucestershire GL12 8JR (GB).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **BENNETT, Robert** [GB/GB]; 11 Tinckley Corner, Nympsfield, Gloucestershire GL10 3TT (GB). **SMITH, Brian, John, Edward** [GB/GB]; 50 Barkers Mead, Brimsham Park, Yate, Bristol BS37 7LF (GB).

(74) Agent: **JACKSON, John, Timothy**; Renishaw plc, Patent Dept., New Mills, Wotton-under-Edge, Gloucestershire GL12 8JR (GB).

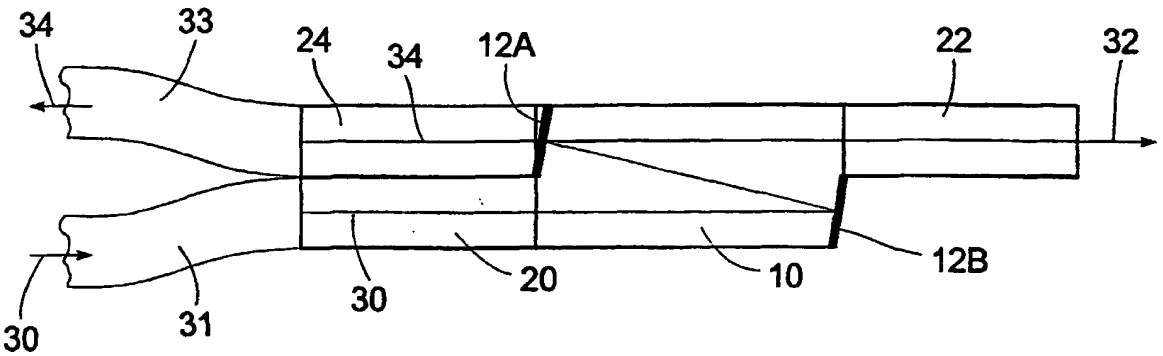
(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report*
— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: SPECTROSCOPIC PROBE



(57) Abstract: A spectroscopic probe includes a monolithic block (10) of transparent material and GRIN lenses (20, 22, 24). Light for illuminating a sample is delivered by an optical fibre (31), and light scattered by the sample is output by an optical fibre (33). The block (10) has opposing angled faces (12A, 12B), coated with a dichroic filter coating and a reflective coating respectively. A method for making blocks (10) is also disclosed, in which the coatings are first provided on a large sheet, and blocks (10) are then cut from the sheet using angled cuts. Since the coated block reduces the number of components required, the probe can be miniaturised, e.g. for use in an endoscope.

WO 01/53865 A1